

IN THE CLAIMS

1-6. (Canceled)

7. (Currently Amended) The hydrophilic Hydrophilie polypeptide of *Eimeria* ~~according to claims 1—6,~~ characterised ~~in that the homology is 100%,~~ comprising an amino acid sequence that shares at least 70% homology with a sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO;4, SEQ ID NO:5 and SEQ ID NO:6.

8. (Currently Amended) A hydrophilic Hydrophilie polypeptide ~~according to claims 1—7,~~ characterised ~~in that the Eimeria is of Eimeria tenella,~~ comprising an amino acid sequence that shares at least 70% homology with a sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO;4, SEQ ID NO:5 and SEQ ID NO:6.

9. (Currently Amended) An isolated DNA fragment comprising a nucleotide sequence encoding a hydrophilic polypeptide or an immunogenic fragment of said polypeptide, according to claim 7 ~~claims 1—8.~~

10. (Currently Amended) The DNA fragment according to claim

9, ~~characterised in that it~~ which comprises a nucleic acid sequence as depicted in SEQ ID NO: 39 or a fragment thereof.

11. (Currently Amended) The DNA fragment according to claim 9, ~~characterised in that it~~ which comprises a nucleic acid sequence as depicted in SEQ ID NO: 40 or a fragment thereof.

12. (Currently Amended) The DNA fragment according to claim 9, ~~characterised in that it~~ which comprises a nucleic acid sequence as depicted in SEQ ID NO: 41 or a fragment thereof.

13. (Currently Amended) A recombinant ~~Reeombinant~~ DNA molecule comprising a DNA fragment according to claim 9 ~~elaims 9 —12.~~

14. (Currently Amended) A live ~~Live~~ recombinant carrier comprising a DNA fragment according to claim 9 ~~elaims 9 —12 or a recombinant DNA molecule according to claim 13.~~

15. (Currently Amended) A host ~~Host~~ cell comprising a DNA fragment according to claim 9 ~~elaims 9 —12, a recombinant DNA molecule according to claim 13 or a live recombinant carrier according to claim 14.~~

16. (Currently Amended) A vaccine ~~Vaccine capable of~~
~~protecting~~ for the protection of poultry against *Eimeria*
infection, ~~characterised in that it comprises~~ comprising at least
one immunogen selected from the group consisting of

a hydrophilic polypeptide according to claim 7; ~~claims 1-8,~~
an isolated DNA fragment comprising a nucleotide sequence
encoding a hydrophilic polypeptide or an immunogenic fragment of
said polypeptide according to claim 7; ~~according to claims 9-12,~~

a ~~Recombinant~~ recombinant DNA ~~fragment~~ molecule comprising
said DNA fragment; ~~according to claim 13,~~

a live recombinant carrier comprising said DNA fragment or
recombinant DNA molecule; ~~according to claim 14 or and~~

a host cell comprising said DNA fragment, said recombinant
DNA molecule or said live recombinant carrier; ~~according to claim~~
15

and a pharmaceutically acceptable carrier.

17. (Currently Amended) The vaccine ~~Vaccine~~ according to
claim 16, which ~~characterised in that it~~ additionally comprises
an adjuvant.

18. (Currently Amended) The vaccine ~~Vaccine~~ according to
claim 16 ~~or 17, which~~ ~~characterised in that it~~ comprises an at
least one additional immunogen ~~derived from~~ of a poultry pathogen

~~pathogenic virus or micro-organism.~~

19. (Currently Amended) The vaccine ~~Vaccine~~ according to claim 18, ~~characterised in that wherein the immunogen at least one poultry pathogen is selected from the group consisting of poultry pathogenic viruses or micro-organisms consisting of~~ Marek's Disease virus (MDV), Newcastle Disease virus (MDV), Infectious Bronchitis virus (IBV), Chicken Anaemia Agent (CAA), ~~Reo-virus~~ Reovirus, ~~Avian Retro-virus~~ Retrovirus, Fowl Adeno ~~virus~~ Adenovirus, Turkey Rhinotracheitis virus, *Salmonella* spp. ~~or~~ and *E. coli*.

20. (Currently Amended) The vaccine ~~Vaccine~~ according to claim 16 ~~claims 16—19, characterised in that it is~~ which is in freeze-dried form.

21. (Currently Amended) An antibody raised against a polypeptide according to claim 7 ~~claims 1—8~~.

22. (Currently Amended) A method ~~Method~~ for the preparation of antibodies against a polypeptide according to claim 3, ~~claims 1—8, characterised in that said method comprises~~ which comprises administering said polypeptide to a suitable animal.

23. (Canceled)

24. (Currently Amended) A method ~~Method~~ for the preparation of a vaccine for ~~combating~~ combatting *Eimeria* infections, ~~characterised in that said method comprises~~ comprising admixing antibodies according to claim 21 with a pharmaceutically acceptable carrier.

25. (Currently Amended) A method ~~Method~~ for the detection of *Eimeria* parasites in poultry, ~~characterised in that said method comprises~~ comprising incubating a DNA preparation from the poultry with a DNA fragment according to claim 9, claims 9—12 whereby the detection of hybrids is indicative of the presence of *Eimeria* in the DNA preparation.

26. (Currently Amended) A method ~~Method~~ for the detection of antibodies against *Eimeria* parasites in poultry serum, ~~characterised in that said method comprises~~ comprising incubating said serum with the hydrophilic polypeptide according to claim 7, claims 1—8 whereby the formation of a complex between the polypeptide and antibodies in the serum indicates a positive result.

27. (NEW) A live recombinant carrier comprising a

recombinant DNA molecule according to claim 13.

28. (NEW) A host cell comprising a recombinant DNA molecule according to claim 13.

29. (NEW) A host cell comprising a live recombinant carrier according to claim 14.